

WHAT IS CLAIMED AS NEW AND IS INTENDED TO BE SECURED BY LETTERS PATENT IS:

1. Activated carbon which is prepared from granular isotropic pitch.
2. The activated carbon according to Claim 1, wherein the granular isotropic pitch has
5 an average particle diameter of 10 mm or less.
3. The activated carbon according to Claim 1, which has a specific surface area of 100
to 4000 m²/g.
4. The activated carbon according to Claim 1, wherein the total amount of surface
functional groups is 2.5 meq/g or less.
5. The activated carbon according to Claim 1, wherein the half band width of a peak
10 indicating the D band of amorphous carbon is 1 to 4 times larger than that of a peak indicating
the D band of graphite carbon in Raman spectra.
6. A process for producing activated carbon, which comprises:
activating granular isotropic pitch with a chemical agent.
7. The process according to Claim 6, wherein at least one part of the chemical agent is
a compound of an alkali metal element, a compound of an alkaline earth metal element, zinc
chloride, sulfuric acid, or phosphoric acid.
8. The process according to Claim 6, wherein the chemical agent is potassium hydroxide
or sodium hydroxide.
- 20 9. The process according to Claim 6, wherein the temperature of activation with the
chemical agent ranges from 500 to 900°C.
10. The process according to Claim 6, wherein the amount of chemical agent ranges from
100 to 400 parts by weight in relative to 100 parts by weight of the isotropic pitch.
11. The process according to Claim 6, wherein the activating step comprises a pitch-

moistening step of moistening at least the surface of the isotropic pitch at a temperature of 200°C or lower, a pitch-solidifying step of eliminating moisture at a temperature of 400°C or less, and a pitch heat-treating step of heat-treating the solid at a temperature over 400°C with maintaining the solid state of the pitch.

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12. A process for producing activated carbon, which comprises:

infusiblizing granular isotropic pitch and subsequently activating the pitch with a chemical agent.

13. The process according to Claim 12, wherein at least one part of the chemical agent is a compound of an alkali metal element, a compound of an alkaline earth metal element, zinc chloride, sulfuric acid, or phosphoric acid.

14. The process according to Claim 12, wherein the chemical agent is potassium hydroxide or sodium hydroxide.

15. The process according to Claim 12, wherein the temperature of activation with the chemical agent ranges from 500°C to 900°C.

16. The process according to Claim 12, wherein the amount of chemical agent ranges from 100 to 400 parts by weight in relative to 100 parts by weight of the isotropic pitch.

17. The process according to Claim 12, wherein the activating step comprises a pitch-moistening step of moistening at least the surface of the isotropic pitch at a temperature of 200°C or lower, a pitch-solidifying step of eliminating moisture at a temperature of 400°C or less, and a pitch heat-treating step of heat-treating the solid at a temperature over 400°C with maintaining the solid state of the pitch.

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18. A process for producing activated carbon, which comprises:

heat treating granular isotropic pitch and subsequently activating the pitch with a

chemical agent.

19. The process according to Claim 18, wherein at least one part of the chemical agent is a compound of an alkali metal element, a compound of an alkaline earth metal element, zinc chloride, sulfuric acid, or phosphoric acid.

20. The process according to Claim 18, wherein the chemical agent is potassium hydroxide or sodium hydroxide.

21. The process according to Claim 18, wherein the temperature of activation with the chemical agent ranges from 500°C to 900°C.

22. The process according to Claim 18, wherein the amount of chemical agent ranges from 100 to 400 parts by weight in relative to 100 parts by weight of the isotropic pitch.

23. The process according to Claim 18, wherein the activating step comprises a pitch-moistening step of moistening at least the surface of the isotropic pitch at a temperature of 200°C or lower, a pitch-solidifying step of eliminating moisture at a temperature of 400°C or less, and a pitch heat-treating step of heat-treating the solid at a temperature over 400°C with maintaining the solid state of the pitch.

24. A process for producing activated carbon, which comprises:
infusibilizing granular isotropic pitch and then heat-treating and subsequently activating the pitch with a chemical agent.

25. The process according to Claim 24, wherein at least one part of the chemical agent is a compound of an alkali metal element, a compound of an alkaline earth metal element, zinc chloride, sulfuric acid, or phosphoric acid.

26. The process according to Claim 24, wherein the chemical agent is potassium hydroxide or sodium hydroxide.

27. The process according to Claim 24, wherein the temperature of activation with the chemical agent ranges from 500°C to 900°C.

28. The process according to Claim 24, wherein the amount of chemical agent ranges from 100 to 400 parts by weight in relative to 100 parts by weight of the isotropic pitch.

5 29. The process according to Claim 24, wherein the activating step comprises a pitch-moistening step of moistening at least the surface of the isotropic pitch at a temperature of 200°C or lower, a pitch-solidifying step of eliminating moisture at a temperature of 400°C or less, and a pitch heat-treating step of heat-treating the solid at a temperature over 400°C with maintaining the solid state of the pitch.

10 30. A polarizable electrode which is prepared by mixing the activated carbon of Claim 1 with at least a binder and an electroconductive filler.

31. The polarizable electrode according to Claim 30, which is a coat electrode prepared by applying a paste mixture containing the activated carbon to a surface.

15 32. The polarizable electrode according to Claim 30, which is a sheet electrode prepared by forming the mixture into a sheet.

33. The polarizable electrode according to Claim 30, which has an electrode density of 0.3 g/cm³ or more.

34. The polarizable electrode according to Claim 31, which has an electrode density of 0.3 g/cm³ or more.

20 35. The polarizable electrode according to Claim 32, which has an electrode density of 0.3 g/cm³ or more.

36. An electric double layer capacitor composed essentially of a pair of polarizable electrodes, a current collector set onto each of the polarizable electrodes, and an electrolyte

solution, wherein at least one of the polarizable electrodes is the polarizable electrode according to Claim 30.

37. An electric double layer capacitor composed essentially of a pair of polarizable electrodes, a current collector set onto each of the polarizable electrodes, and an electrolyte solution, wherein at least one of the polarizable electrodes is the polarizable electrode according to Claim 31.

38. An electric double layer capacitor composed essentially of a pair of polarizable electrodes, a current collector set onto each of the polarizable electrodes, and an electrolyte solution, wherein at least one of the polarizable electrodes is the polarizable electrode according to Claim 32.

39. The electric double layer capacitor according to Claim 36, wherein the expansion ratio of the polarizable electrodes is 40% or less after charging and discharging.

40. The electric double layer capacitor according to Claim 37, wherein the expansion ratio of the polarizable electrodes is 40% or less after charging and discharging.

41. The electric double layer capacitor according to Claim 38, wherein the expansion ratio of the polarizable electrodes is 40% or less after charging and discharging.